CORE
Metadata, citation and similar papers at core.ac.uk
Provided by Elsevier - Publisher Connector

Rotational instability >2 cm was characterised by complete fracture of the sacrum posteriorly. Stabilisation of the pelvic ring in group I was associated with a significant reduction of the VAS within 72 h from surgery, early ambulation and discharge from the hospital.
Conclusion: This study supports the view that not all LCI fracture patterns are mechanically stable. Examination under anaesthesia of the pelvic ring can assist the clinician in the decision-making progress.
Keywords: Lateral compression; Pelvic fractures; Clinical; Case/control series

doi:10.1016/j.injury.2009.06.171

[4A.2]

3rd Prize

Payment by results (PbR) in orthopaedic trauma: Where are we losing?

N.S. Harshavardhana[b], A. Sahu[c,*], S. Maret[d], A. Sangar[a], P. Jairaj[a], S.W. Richards[a]

[a] *Poole General Hospital NHS Trust, UK*
[b] *Nottingham University Hospitals NHS Trust, UK*
[c] *Stepping Hill Hospital, UK*
[d] *Southampton University Hospitals NHS Trust, UK*

Background: Clinical coding has attracted significant interest recently as it has become synonymous with reimbursement. We hereby present the results of first and largest study in the UK involving 547 orthopaedic trauma cases wherein a meticulous in-depth analysis was performed.
Study design: Completed audit cycle.
Objectives: To review the existing coding for orthopaedic trauma, to ascertain accuracy of procedural codes and to identify limitations, implement changes, re-evaluate and close the audit loop.
Methods: All orthopaedic trauma surgeries (244 cases) performed over 1 month (March 2006) were comprehensively analysed. The primary procedural accuracy of OPCS4.2, its limitations and loss of revenue due to missing codes (6 patients) were determined. Changes were implemented to streamline/optimise financial reimbursement and improve data quality/accuracy by education/training. Electronic discharge summaries were implemented to enhance efficiency. The audit loop was subsequently closed to evaluate implementation of these changes by re-auditing all trauma surgeries performed in the same month the following year, i.e. March 2007 (303 cases) against OPCS4.3 codes.
Results: The primary procedural accuracy was 95.38% (11/238 coding errors) and omissions in 6 patients resulted in net loss of revenue of £13,700 for March 2006. Following the closure of audit loop in March 2007 after implementation of changes, the primary procedural accuracy was 98.95% (3/286 coding errors) and cumulative loss of revenue due to omissions in 17 patients was £46,750.
Discussion: Despite improvement in coding accuracy to 99% on closure of audit loop, there were increased financial losses for trauma directorate. An in-depth analysis is being performed to identify lacunae (training/staffing issues) as the trauma workload rose by 25% in a year.
Conclusion: Accurate and ethical coding is challenging having impact on data quality, audit and research in addition to reimbursement. Literature emphasises on legible documentation, liaison between coders and clinicians and education/training of healthcare professionals.

The remainder of the abstracts presented at the British Trauma Society Meeting can be found below.

doi:10.1016/j.injury.2009.06.172

1A.1

1A: General Trauma

A cross-sectional survey of current management of isolated sternal fractures in the UK: Time for evidence based practice

A. Ramavath*, J. Kulangara, M. Hossain, J. Andrew

Ysbyty Gwynedd, UK

The practice of routine admission of isolated sternal fractures to observe for possible cardiac complications is still widespread in the UK in spite of evidence to the contrary. We undertook a cross-sectional telephone survey of management of isolated sternal fractures in the UK. We contacted 85 acute admitting units over a 3-month period and were able to get a response from 67 units. Most of the hospitals were district general hospitals (52) and situated in England (49) (Wales 4, Scotland 11, Northern Ireland 3). Orthopaedic department was the commonest admitting department (26) (General Surgery 19, Cardiothoracic Surgery 11, Accident and Emergency 9, Acute Medicine 2). 45 admitting units would routinely admit isolated sternal fractures for observation. Other indications for admission include pain control (33), abnormal cardiac enzymes (28), social circumstances (23), abnormal electrocardiogram (6), and low oxygen saturation (5). Chest X-ray was performed on admission in all hospitals. 63 hospitals perform routine ECG and Cardiac enzymes prior to admission and 6 hospitals carry out Echocardiogram afterwards. Patients were admitted for overnight observation and discharged the next day in all hospitals. Patients were not followed up on discharge from any of these hospitals except 3 units. 2 hospitals with Cardio-thoracic unit would follow-up patients on discharge. 1 hospital regularly advised GP follow-up. We found that the current practice of management of isolated sternal fractures in the UK did not conform to available evidence. A review of literature indicates that patients with isolated sternal fractures are at low risk of significant cardiac complications and do not need extensive investigations or routine admission. In the age of financial constraints a bit of evidence based practice might help us to better utilise finite resources without jeopardising patient care.
Keywords: Sternal fracture; Evidence based practice; Cross-sectional survey; Cardiac complications

doi:10.1016/j.injury.2009.06.173

1A.2

Pre-hospital haemostatic dressings: A systematic review

J. Granville-Chapman*, N. Jacobs, M.J. Midwinter

Royal Centre for Defence Medicine, UK

Haemorrhage is a leading cause of pre-hospital death after military and civilian trauma. Exsanguination from extremity wounds accounts for over half of preventable military deaths; junctional zones provide a particular challenge for first responders. Commercial products have been developed, which claim to outperform standard gauze bandages in establishing and maintaining non-surgical haemostasis. Since 2004, two products, HemCon and

QuikClot, have been deployed in military operations. Newer products have since become available; which aim to supersede HemCon and QuikClot and become the new 'standard' for advanced haemostatic dressings.

The aim was to perform a systematic review of clinical and preclinical evidence, comparing relative efficacy and safety of available haemostatic products; which are relevant to pre-hospital military and civilian emergency medical providers.

An English language literature search was performed, using PubMed® and Web of Knowledge® Databases, with cross referencing, focussed searches and manufacturer communication. For studies employing in vivo models, the injury model was required to produce life threatening haemorrhage. Products were categorised by their primary mode of action; as either factor concentrators, mucoadhesive agents or procoagulant supplementors.

From 46 articles collated, 33 papers were eligible for inclusion. Products have been tested in 3 types of haemorrhage model: low pressure, high volume venous bleeding; high pressure arterial bleeding and mixed arterial–venous bleeding. The efficacy of products varies with the model adopted.

Criteria for the 'ideal battlefield haemostatic dressing' have been defined, but are yet to be realised. Since 2004, HemCon (a mucoadhesive agent) and QuikClot (a factor concentrator) have been widely deployed by US and UK Armed Forces. Retrospective clinical data supports their efficacy. However, in recent animal trials of lethal haemorrhage, WoundStat (mucoadhesive); Celox (mucoadhesive) and CombatGauze (procoagulant supplementor) all outperformed both HemCon and QuikClot. WoundStat achieved the highest efficacy, followed by CombatGauze and Celox.

HemCon and QuikClot have augmented the haemostatic capabilities of military first aid responders, but newer products appear more effective and should be considered as replacements for current in service systems. These products could have utility for civilian pre-hospital care.

Keywords: Haemorrhage; Pre-hospital; Control; Battlefield

doi:10.1016/j.injury.2009.06.174

1A.3

The demographics of trauma cases over 6 years in a regional trauma centre

C.J. Mullan*, D. Kealey

Royal Victoria Hospital, UK

Introduction: Many indicators suggest that an aging population will in turn lead to more fragility fractures. As a result, trauma centres must make plans to provide the adequate care for these patients in the future.

The RVH provides fracture services for most of the greater Belfast area, and is also the Regional Trauma Centre for Northern Ireland. With the changing environment in Northern Ireland, it is also predicted that assaults etc will have decreased over the last number of years.

A review of how the demographics and modes of injury have changed over the past 6 years will help us draw conclusions useful for future service provision.

Methods: A Regional Fracture Outcome Unit has been working since 2002. We have information on 19,000 admissions to our unit from 2002 to 2006. A review of admissions per year comparing age of patient and mode of injury (as per ICD 10 coding) was performed.

Results: Fragility fractures have shown a gradual rise over the 6 years. This is evidenced by the increase in admissions from 543 in 2002 to 666 in 2007 in the over 80 age group admitted after a simple fall. This is an average of 20 per year increase.

Overall admissions in the 80+ age group also show a rising trend from 632 to 776 over the same time period.

Admissions to the fracture unit for Gun Shot Wounds have decreased from 43 and 54 in 2002 and 2003 down to 11 and 3 for 2006 and 2007. Assaults have shown no marked variation.

Discussion: The increasing elderly population and subsequent increasing rate of admission of this group provides challenges in managing resources during the inpatient stay in hospital.

Interestingly, this may well be offset somewhat by the decrease in gun crime injuries now clearly evidenced in Northern Ireland.

Keywords: Demographics; Fragility; Elderly; Population

doi:10.1016/j.injury.2009.06.175

1A.4

Analysis of injuries and deaths caused by firearms in England and Wales

M.J. Davies*, F.E. Lecky

University of Manchester, UK

Introduction: There is currently concern that injuries and deaths caused by firearms is increasing. This is supported by Home Office data.[1] Despite a few small, local studies that also demonstrate an upward trend, affecting largely young, black males and a link to urbanisation, there has been little UK civilian research in this area.[2,3,4] Even less is known about deaths from firearms. Such information will allow instigation of injury prevention programmes.

Methods: A retrospective analysis of firearm injuries on a trauma registry (1990–2007). Information was collected regarding incidence and epidemiology of those involved. The UK Office of National Statistics (ONS) provided data on all deaths by firearm during the same period.

Results: Of 237,781 registry cases, 656 (0.28%) were due to firearm injury. There were 615 males and 36 females with a median age of 28 and 36.9 years, respectively. Median male Injury Severity Score was 10 with a mortality of 12.7% compared to 15 and 16.1% for females. The highest proportion of injuries was submitted from London (0.87%), with the South West (0.11%) submitting the least. 94% resided in urban areas, 73% presented 'out of hours' and 94% were alleged assaults. As a proportion of all injuries submitted a five-fold increase was demonstrated. In contrast, ONS data showed the greatest number of deaths were self-inflicted (2032) rather than assaults (511), the South West having the highest number of such deaths compared to London. An older male group was predominately involved. A relationship with firearm certificates is noted.

Discussion: The incidence of injury and death due to firearms is low but increasing. The majority of injuries are assaults affecting predominately young males living in urban areas. However, of all deaths, self-inflicted wounds are four times more common than assaults, affecting predominately older males living in rural areas.

Keywords: Firearm; Gun; Death; Injury

References

1 Coleman K, Kaiza P, Roe S. In: Povey D (Ed.), Homicides, Firearm Offences and Intimate Violence 2007/08 (Supplementary Volume 2 to Crime in England and Wales 2007/08). Home Office. Third Edition, pp. 37–38.
2 Cowey A, et al. A review of 187 gunshot wound admissions to a teaching hospital over a 54-month period: training and service implications. Ann R Coll Surg 2004;86(2):104–7.
3 Porteus MJ, Edwards SA, Groom AF. Inner-city gunshot wounds. Injury 1997;28(June–July (5–6)):385–7.
4 Persad IJ, Reddy RS, Saunders MA, Patel J. Gunshot injuries to the extremities: experience of a UK trauma centre. Injury 2005;36(March (3)):407–11.

doi:10.1016/j.injury.2009.06.176